Philips Semiconductors

Philips Semiconductors' digitally tuned TEA5767/68 FM stereo receiver IC is based on an innovative architecture concept that simplifies radio design, significantly reducing the number of external components. Delivering the highest performance levels, this one-chip radio solution occupies minimal PCB area (9x9 mm) making it ideal for all space-critical and low voltage applications such as mobile phones and MP3 players.

TEA5767/68

single-chip FM stereo radio

The single-chip TEA5767/68 is a miniature, digitally tuned radio IC that utilizes an entirely new radio architecture concept that replaces passive components and complex circuitry, with on-board silicon, drastically reducing the overall bill of materials and making design-in easier. It requires zero external alignments, resulting in shorter design times and lower manufacturing costs due to simplified component placement and reduced logistics overhead. Also, being adjustment free, it delivers increased quality and reliability, both in manufacture and throughout its lifetime in your end application.

As well as offering increased functionality in handheld devices, the radio IC is ideal for integration in a wide range of applications, where its minimal interaction with the rest of your application helps avoid reception / transmission interference. The TEA5767/68 also features very low power consumption and its small footprint makes it ideal for applications where board space is at a premium.

Capable of tuning to European, US and Japanese FM bands, the TEA5767/68 does not need an external FM discriminator and handles IF selectivity entirely on-chip.

www.semiconductors.philips.com

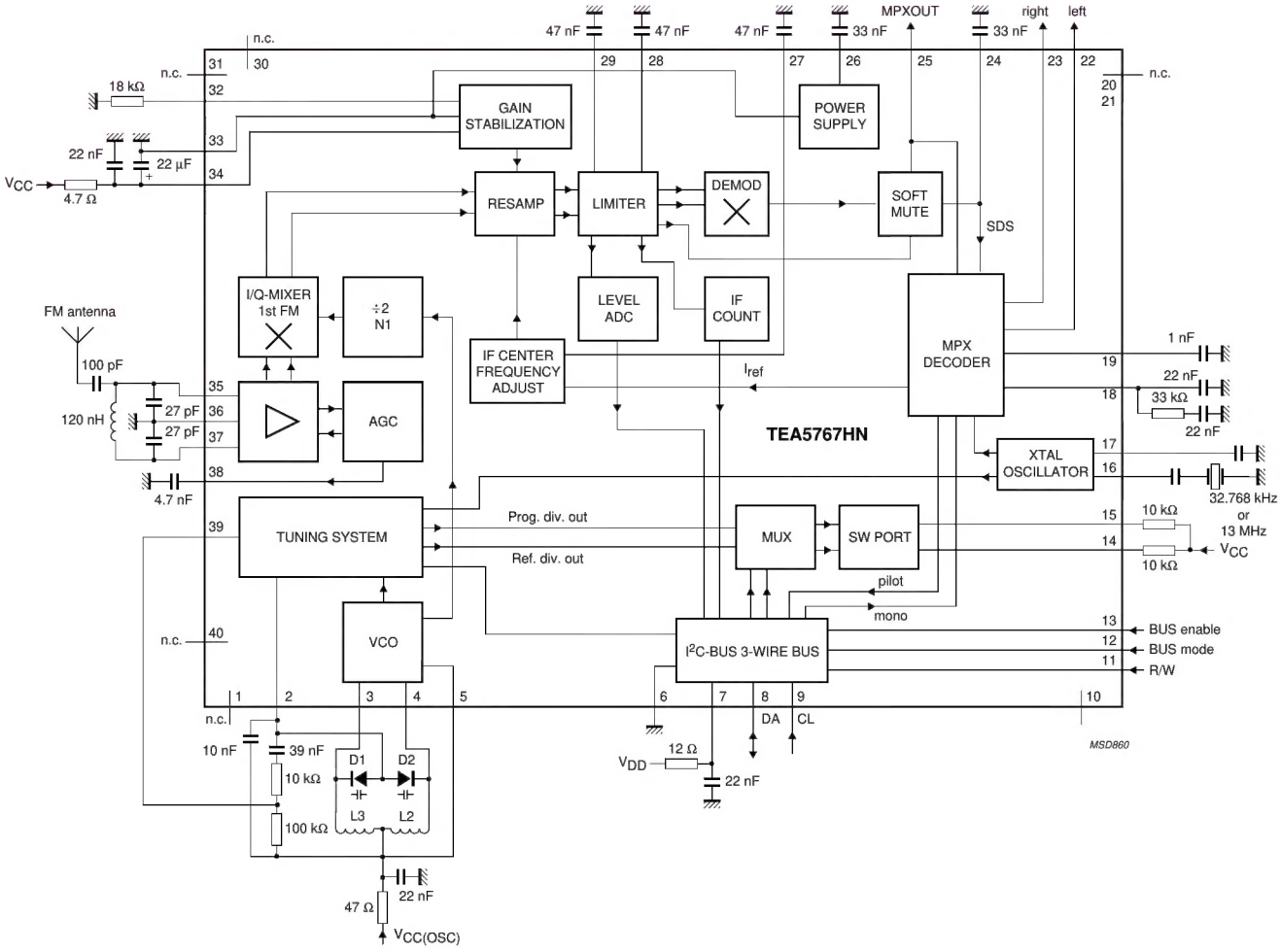
Applications

- FM stereo receiver in MP3 players, portable audio devices and mobile phones
- Miniature FM radio
- Mini- and micro-sized audio systems
- Home Hi-Fi

Key features

- Only 18 external components (19 passive components replaced by silicon)
- No alignments necessary
- Fully integrated FM IF selectivity and demodulation
- Signal dependent mono / stereo blend (stereo noise cancelling)
- Adjustment free stereo decoder
- Soft mute and signal dependent high cut control (HCC)
- Autonomous Search Tune (AST) to decrease bus communication
- Software switchable low / high injection local oscillator
- Two software programmable ports
- 32.768 kHz / 6.5 MHz / 13 MHz software switchable oscillator
- Package/interface options
  - TEA5767HL with 3-wire bus – LQFP32
  - TEA5768HL with I^2C-bus – LQFP32
  - TEA5767HN with switchable 3-wire / I^2C-bus – small HVQFN40
- Standby mode switched via bus
- 2.5 V minimum supply voltage
- Automotive temperature range (at 5 V_{CC})

TEA5767/68 single-chip FM stereo radio



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SCB 73

2001

Printed in The Netherlands

Date of release: March 2002

Document order number: 9397 750 09421

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